200

639

SUPPLEMENT TO

THE

MYSORE GAZETTE.

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Published by Authority.

BANGALORE, SATURDAY 31ST AUGUST 1867.

MISCELLANEOUS PAPERS.

REPORT ON THE COMPLETION OF THE HURIHUR BRIDGE.

Extract from a letter, from the Chief Engineer of Mysore, to the Secretary to the Commissioner of Mysore, dated 3rd June 1867.

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3. It will be recalled to mind, that, after the lamented death of the contractor, Mr. Cockburn, in April 1866, the foundations of two piers, 9 and 10, had to be built, under circumstances of extraordinary difficulty, and that this was accomplished satisfactorily was, as already reported, entirely owing to the great energy and intelligence of Lieutenant Pole.

4. The central portions of the arches Nos. 1, 2 and 3 had also from undue sinkage, to be removed, and a new and higher curve substituted. Therefore, when Captain Johnson assumed charge, in May last year, all the arches, 14 in number, had, practically speaking, to be turned, and that he has accomplished this successfully within almost exactly one year, must I think be held to redound greatly to his credit.

5. But the fact is, that the progress actually made, is very much greater than this bare statement would lead one to suppose; and this is the more surprising and creditable, as Captain Johnson, having no member of the permanent establishment to aid him on the bridge, had to see to everything almost himself. His temporary hands, drummer Jones, pensioner Brady and Mr. Shaw, worked very well and honestly, but nearly all the other men he had, belonged, I believe, to the "loafer" class, and 6 of them, in turn, having been sent away from the work for continued drunkenness, he was at last reduced to the three men above named.

6. When the river, moreover, fell sufficiently to allow of work being carried on this season, it became clear, from the considerable depth of water which still remained, that it would be impossible to employ any kind of direct support for the centerings of arches Nos. 4, 5, 6, 9, or 10, and that trusses must be manufactured for this purpose. This, it is true, had been partly foreseen by the late contractor, and he had made up several timber trussed frames; but in applying them, and calculating their strength, it was evident that they would be quite unable to bear the weight of the unkeyed arch.

7. The difficulties about these frames were alone known to Captain Johnson and myself; and I need hardly say, that considering the whole of the circumstances, the matter caused one of those great anxieties which pretty nearly always crop up to test the metal of an Engineer in the management of every great work. It will suffice however for me to state, that this was one great difficulty overcome by an amount of skill, pluck, and untiring energy, on the part of Captain Johnson, which I consider to be deserving of the highest praise.

8. There was a great number of other minor difficulties connected with labour, the manufacture of first class bricks, the supply of firewood, &c., with petty annoyances of tolls and taxes, levied on every thing for the bridge, by the Bombay authorities; but it is unnecessary to allude to them here.

9. Without going minutely into detail, it will perhaps suffice to invite attention to the accompanying rough outline of the works, (to be obligingly returned

201

after submission to Government), as I found them on my inspection of the 19th of last February. Arches Nos. 1, 2, and 3, which had been completed, early in the official year, were uncentered, and the water way was clear. The centering of No. 4, which was the first built over the trusses, had been lowered on the 17th February, and the arch was clear. All the rest were in the condition shewn since that date ; therefore, or in very little more than three months, no less than 10 elliptical arches of 60 feet span each have been completed, and 8 of these have been uncentered and cleared.

10. This fact will speak for itself, and I trust will, with the Commissioner's support, call forth a marked expression of approbation from the Government of India, with reference to Captain Johnson's operations. I may be permitted to add, that nothing can exceed the excellence of the material employed. Both it and the workmanship have in fact been so good and exact, as to allow of the whole being pointed exactly along all the true joints of the brick-work throughout. There is probably not a finer specimen of brick-work in India.

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Letter from the Officiating Commissioner of Mysore, to the Secretary to the Government of India, in the Public Works Department, dated 27th June 1867.

I have the honor to annex for submission to His Excellency the Viceroy in Council, the accompanying copy of a letter, No. 2664—279, dated the 3rd instant, from the Chief Engineer, with its enclosure from Captain Johnson, Executive Engineer, in charge of the Hurryhur Bridge Division, reporting that the last arch of that important structure has been keyed, and that the centering having been removed from all the arches with the exception of the above and one other, the water-way was very nearly clear throughout. As the near approach of the monsoon was expected, the above facts were naturally considered by the Chief Engineer to be very satisfactory.

2. Subsequent reports have intimated the successful removal of all the centerings, and that the south-west monsoon having broken, the river has been in high flood ; under these circumstances no further apprehension for the stability of this noble specimen of engineering work need be entertained, as the bridge has already sustained the severest practical test which could be applied to it, and the amount of water-way provided has been experimentally proved to be ample.

3. Major Sankey's report gives a full, clear, and interesting account of the progress of the work since the death of the late contractor, Mr. G. F. Cockburn, Civil Engineer, in April 186 ; and of the numerous difficulties which have had to be met and overcome in the course of its construction

4. The facts which have been brought to notice by the Chief Engineer, in connection with the rapid and successful execution of the work under the immediate superintendence of Captain Johnson redound in my opinion very greatly to the credit of that officer, and evince his untiring zeal and energy as well as professional skill. The excellent character of the masonry work has been duly testified to by all who have had an opportunity of inspecting the bridge, and I would therefore beg more strongly to support the Chief Engineer in his commendation of Captain Johnson's services, and trust that the Government of India will be pleased to recognize the same by an expression of their marked approbation.

5. I deem it also to be my duty to bring the good conduct and exertion of his subordinates, Drummer Jones, Pensioner Brady, and Mr. Shaw to the favourable notice of Government ; as their conduct, when contrasted with those of the other Overseers who were from time to time employed upon the work, appears to me to deserve commendation.

6. I hope to be at an early date in a position to submit for the final sanction of His Excellency the Viceroy, the supplemental estimate referred to by the Chief Engineer in para 10 of his letter, No. 91—13 dated the 5th of May 1866, copy of which was forwarded to Government under cover of Mr. Bowring's letter, General No. 210—Civil Works No. 8 dated the 9th Idem.

7. Major Sankey has explained in the accompanying letter the grounds on which he deemed it advisable, with a view to the Executive Engineer devoting his whole time and energies to the more essential portions of the bridge before the commencement of the monsoon, to authorize him to defer the preparation and submission of the supplemental estimate. Although the procedure may not have been a very legitimate one under the strict provision of Departmental or Codal Rules, I trust that the departure from the prescribed course may, in consideration of the importance of the object in view, and of the successful results which have been attained, be condoned.

8. The principal features to be embraced in the supplemental estimate will be :—

1st. The compensation to the estate of the late contractor for the extra expense of baling, amounting

to Rs. 30,000, the payment of which, under the authority conceded by the Government of India, Mr. Bowring on the 26th June 1866, on the recommendation of the Chief Engineer, authorized; and *secondly*, the cost of an additional arch, which the late Chief Engineer, Colonel Lawford, after personal inspection of the work in November 1865, considered to be requisite; an opinion in which Major Sankey has subsequently signified his full acquiescence.

9. I would in conclusion beg to request that the accompanying rough sketch of the appearance of the bridge works as taken by Major Sankey on the 19th of last February 1867, when he inspected the works, may be returned; and as to that officer is due the whole credit of the design and conception of the beautiful work, which has been now so far advanced towards completion as to be available for passenger traffic, and for the conveyance of the Government mails at all times, more especially during the height of the present monsoon, when otherwise the swollen water of the Toongabuddra would have presented not unfrequently an almost insuperable obstacle to such traffic; and as I cannot but consider that to his precept and example are due in a great measure the energetic and skilful prosecution of the work by his subordinates, it will afford me much gratification to be the medium of communicating to him the appreciation entertained by the Supreme Government of the services he has rendered in connection with the construction of this important bridge.

641

I have, &c.,
(Signed) C. B. SAUNDERS,
Offg. Commissioner.

Reply of the Government of India, dated 24th July 1867.

In reply to your letter, No. 1856—41, dated 27th June 1867, I am directed to state that the Governor General in Council has read with much satisfaction the report of the rapid progress towards completion of the bridge over the Toongabuddra river at Hurihur, and desires me to request that you will convey to Captain Johnson specially, and to the *subordinates named by you, the commendation of the Government of India for the skill and energy displayed by the former, and the good conduct and exertions of the latter, in carrying on this important work. His Excellency in Council also concurs with you in thinking that the satisfactory progress of the work is in great measure due to Major Sankey, and fully appreciates the services rendered by him in connection with this bridge.

*Drummer Jones.
Pensioner Brady.
Mr. Shaw.

2. The rough sketch received with your letter is returned as requested.

3. The revised estimate will be awaited.

I have, &c.,
(Signed) C. H. DICKENS, Col. R. E.
Secretary to the Govt. of India.

Mysore Government Press, Bangalore—1867.